



Biodiesel & Carbon Policy in the States



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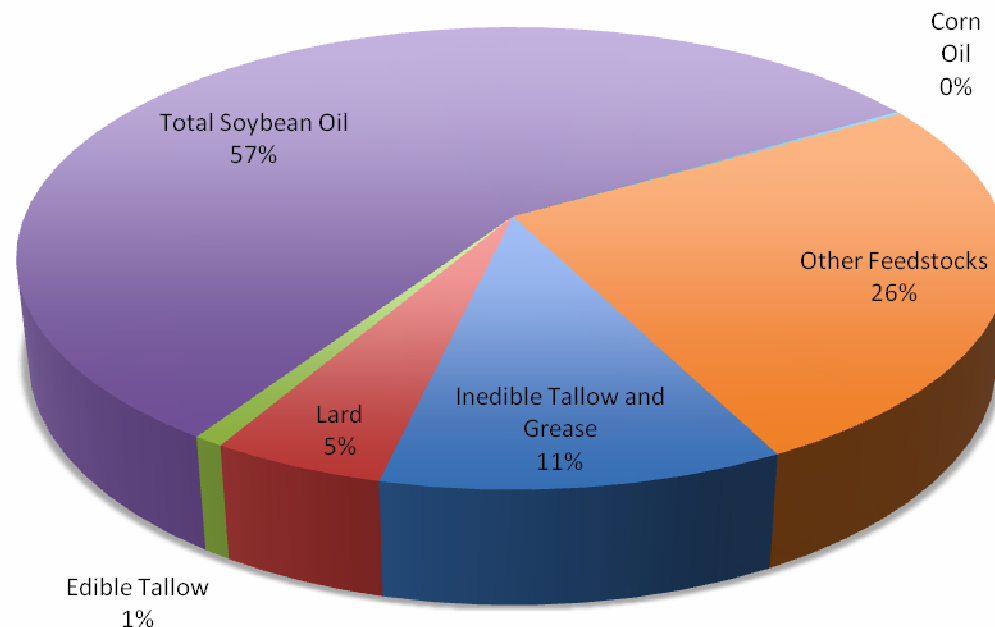
Director of State Governmental Affairs
National Biodiesel Board

Kansas Wind & Renewable Energy Conference
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What is Biodiesel?

- Biodiesel is not raw vegetable oil.
- Biodiesel refers to a vegetable oil or animal fat based diesel fuel consisting of long chain alkyl esters made by reacting fats (lipids) with alcohol (methanol) and a catalyst (sodium hydroxide).
- Biodiesel can be used in diesel engines without modification.
- Biodiesel reduces emissions – carbon dioxide, carbon monoxide, particulate matter, hydrocarbons, sulfates, etc.

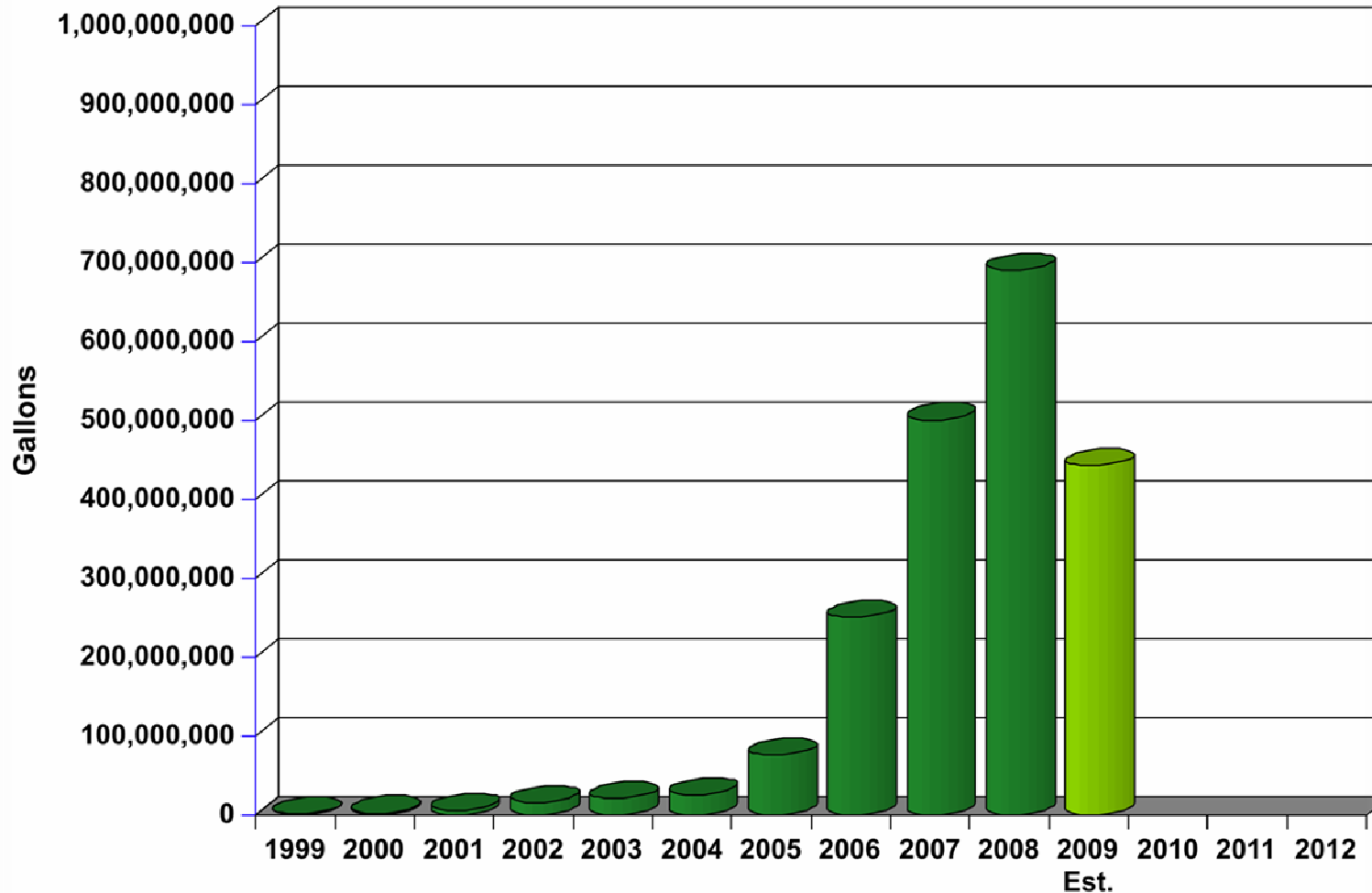
Feedstock Used in Biodiesel Production (2008)

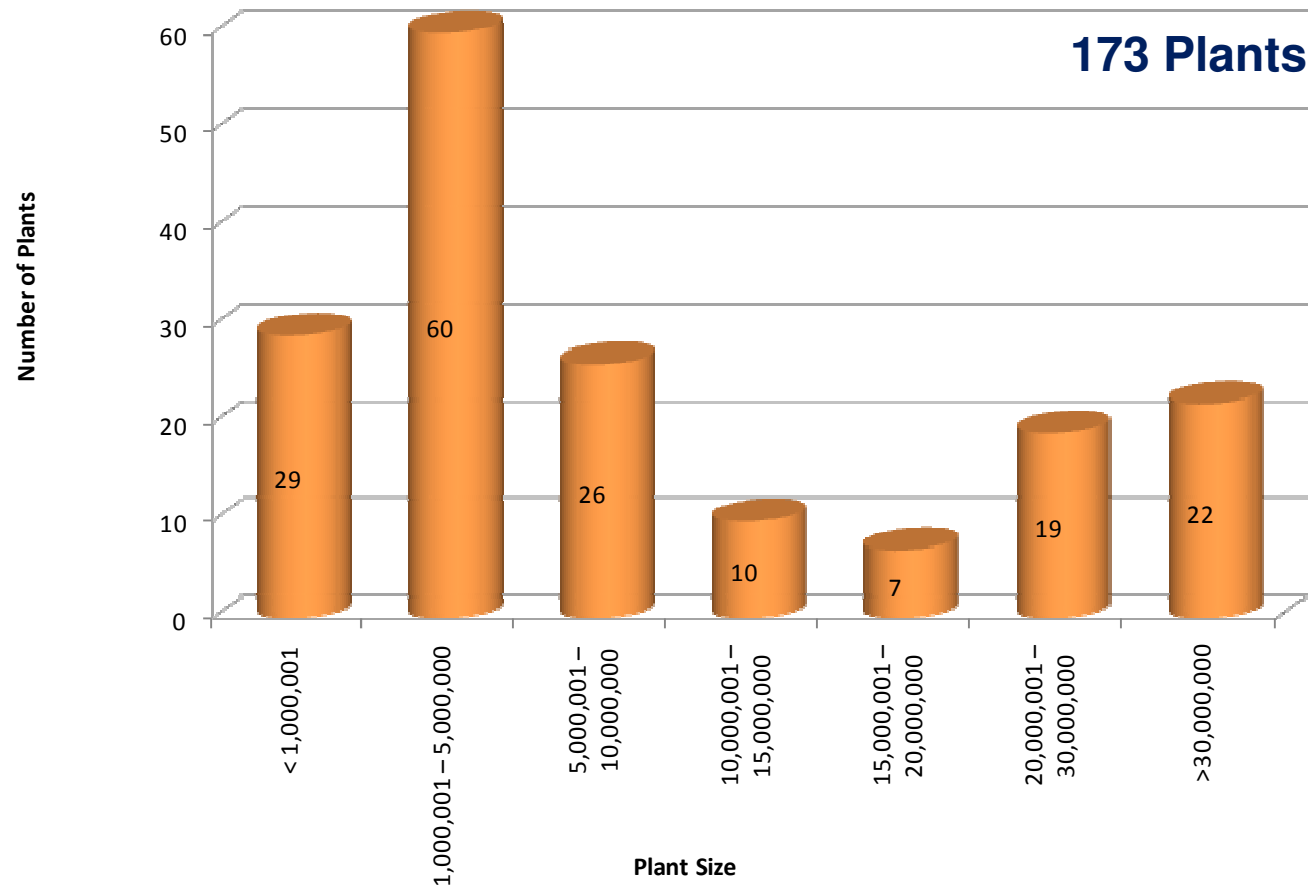


	2007	2008
Total Fats and Oils (mil lbs)	3,747.3	5,933.8
Soybean Oil (mil lbs)	2,944.3	3,314.7
Percent of Total	79%	56%



U.S. Biodiesel Production

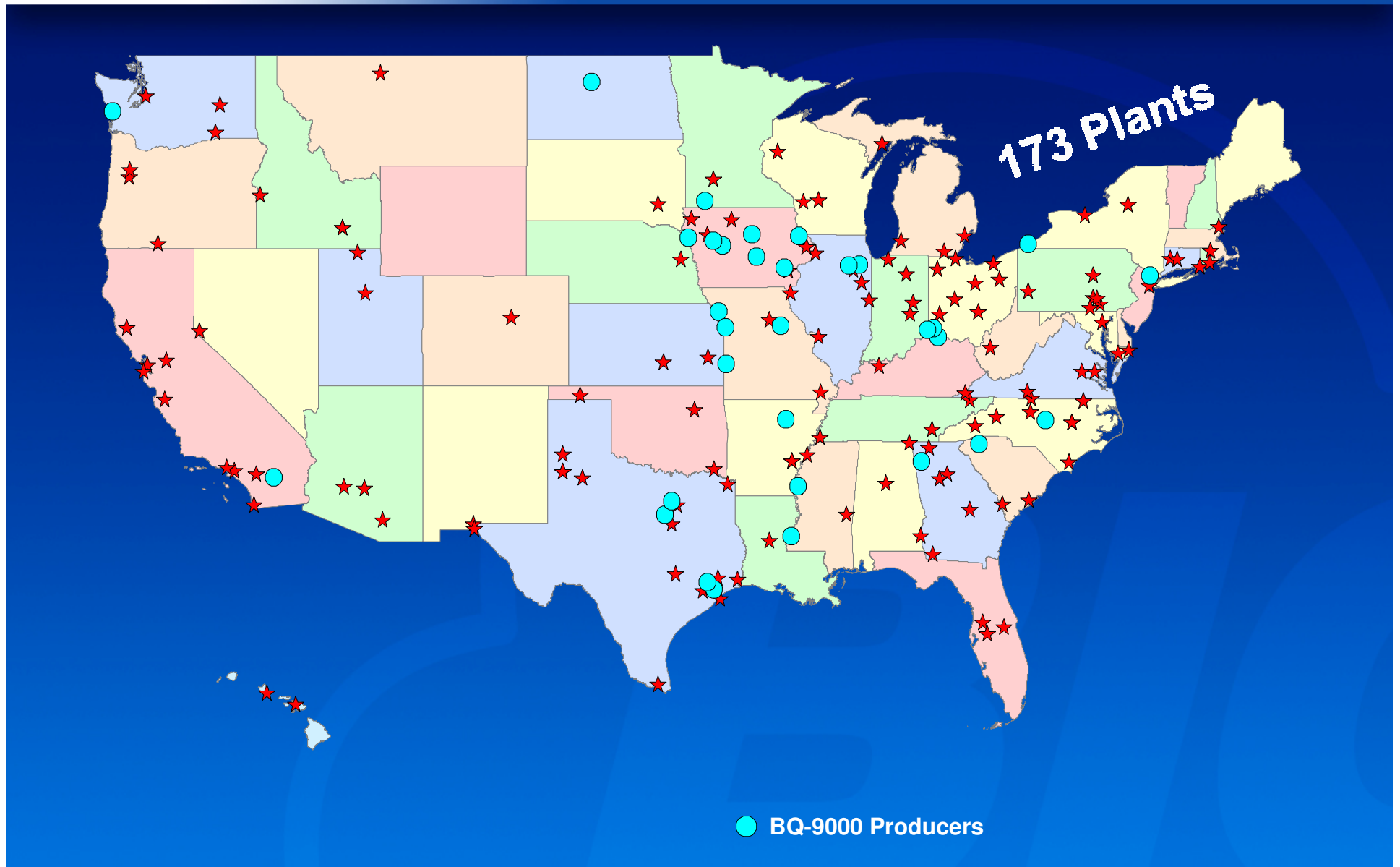




Production Capacity 2.69 billion gallons per year
Average Plant Size 15.5 million gallons per year



Production Locations (6/22/09)



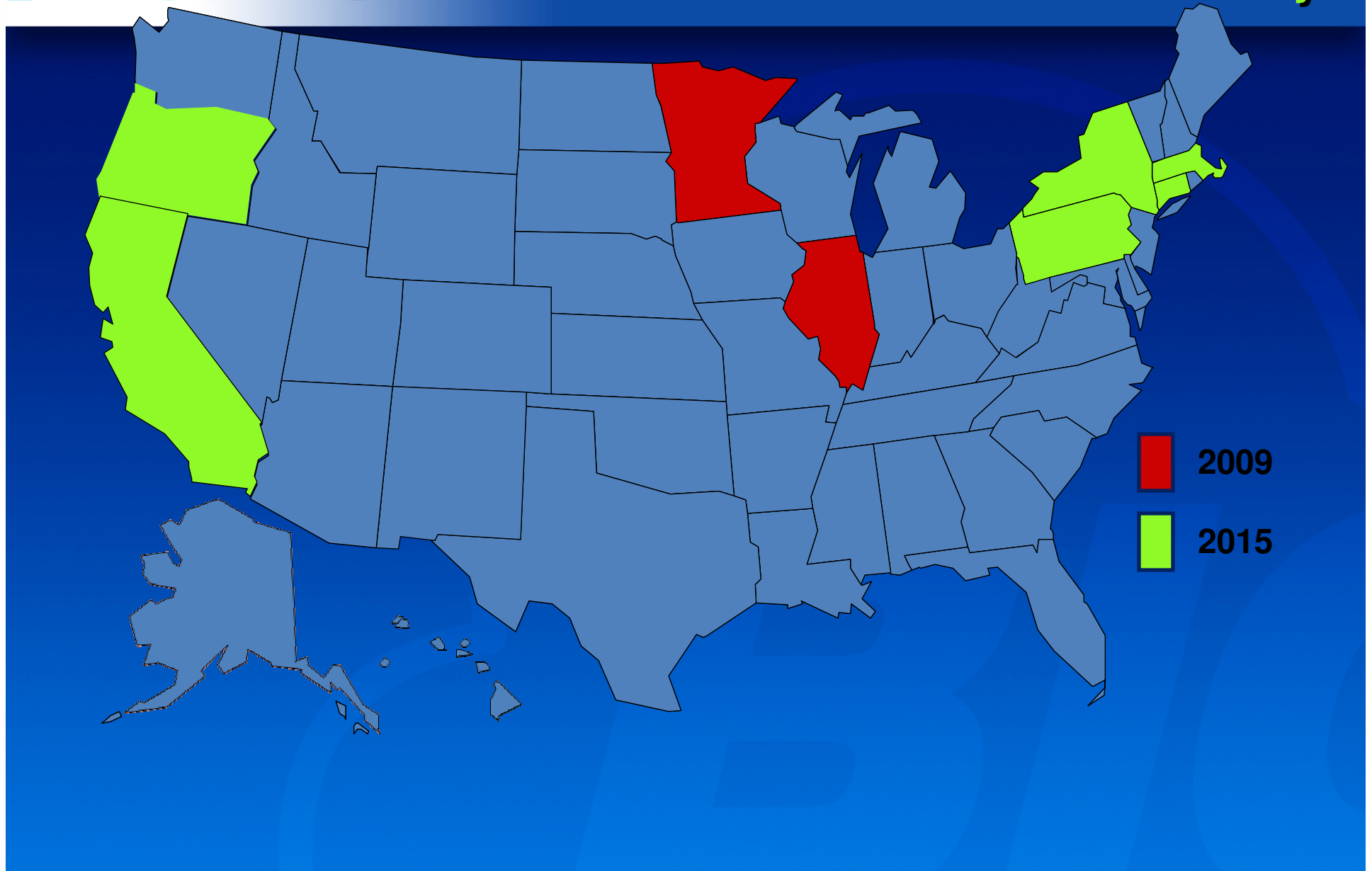


State Level Carbon Policy





Market Effect of Carbon Policy





2009: The Major State Initiatives

- California LCFS
 - 4 billion gallon diesel market
- Northeast States LCFS
 - 9.2 billion gallon diesel market
- Massachusetts B2-B5 mandate
 - 1.1 billion gallon on-road diesel/heating oil market
- New York City B20 mandate
 - 900 million gallon heating oil market
- Oregon LCFS
 - 700 million gallon diesel market
- Iowa B5 Standard
 - 850 million gallon diesel market

Why do we care?

1. Big diesel market.

2. Everyone's following California.

- U.S. EPA
- NESCAUM
- Oregon
- Washington State
- Minnesota
- Massachusetts
- New York City

Brief Summary

- Established by Assembly Bill 32 in 2006.
- Further defined by Executive Order in 2007.
 - As an early action item, implementation will begin in January of 2010.
- Requires a reduction of at least 10% in the carbon intensity for all transportation fuels sold in California by 2020.
 - No artificial GHG reduction thresholds included.
- Compliance obligations can be met by using alternative fuels or acquiring credits.
- Potential 1 billion gallon biodiesel market.



CA LCFS Compliance Schedule

Year	Carbon Intensity (gCO ₂ e/MJ)	% Reduction
2010	95.8	0
2011	95.6	-0.3
2012	95.3	-0.5
2013	95.1	-0.8
2014	94.6	-1.3
2015	93.6	-2.3
2016	92.0	-4.0
2017	90.5	-5.5
2018	88.6	-7.5
2019	86.7	-9.5
2020	86.2	-10.0

Status

- September, 2008: Released CA-GREET model.
 - Soy-based biodiesel yields 63% reduction.
- December, 2008: Released CA-GREET model update.
 - Soy-based biodiesel yields 71.7% reduction.
- January, 2009: Released ethanol ILUC factor (30 g CO₂ eq/mj).
 - Ethanol < 1% better than petroleum.
- March, 2009.
 - ILUC model for soy (42 g CO₂ eq/mj).
 - Reduced soy-based biodiesel from 71.7% to 28%.

- April 23, 2009: CARB board approved LCFS.
 - Included direct soy GHG number and regulatory structure.
- Fall 2009: Palm pathway, finalize ILUC for soy.
- Fall 2009: Appointment of expert review panel.
- January 1, 2010: Implementation.

What's Coming in 2009-2010?

- Not financial incentives!
- LCFS policies
 - California
 - Midwest
 - Midwest Governors Association, Minnesota, Wisconsin
 - Northeast
 - Connecticut, NESCAUM
- Implementation of B2 requirements
 - Oregon, Pennsylvania, Massachusetts





Questions?

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